

**2017**

## Victorian Certificate of Education

### Computing: Informatics Assessment Sheet

#### School-assessed Task

STUDENT NAME

STUDENT NUMBER

ASSESSING SCHOOL NUMBER

Teachers need to make judgments on the student's performance for each assessment criterion. Teachers will be required to choose one number from 0–10 to indicate how the student performed on each criterion with comments, as appropriate.

**Assessment criteria***Analysis***The extent to which the student demonstrates:**

- 1 understanding of formation of a hypothesis, and coherence of a conclusion
- 2 understanding of project management concepts and processes
- 3 skills in acquiring, validating and referencing data
- 4 skills in organising, manipulating and securing data and information
- 5 skills in generating design ideas and designing preferred solutions  
*Design Development*
- 6 skills in technically developing a multimodal online solution that confirms or refutes a hypothesis
- 7 skills in communicating information to educate a world-wide audience through a multimodal online solution  
*Evaluation*
- 8 skills in evaluating the effectiveness of a multimodal solution and assessing the effectiveness of the project plan in monitoring progress

Not Shown  
(0)Low  
(1–2)

(3–4)

Med  
(5–6)

(7–8)

High  
(9–10)**LEVELS OF PERFORMANCE: TEACHER'S COMMENTS**

You may wish to comment on aspects of the student's work that led to your assessment of High, Medium, Low or Not Shown for specific criteria.

If a student does not submit the School-assessed Task at all, N/A should be entered here.

Assessment Criteria		Levels of Performance					
		Not shown	1-2 (low)	3-4	5-6 (medium)	7-8	9-10 (high)
1. Understanding of formation of a hypothesis and coherence of a conclusion	(a)		States a hypothesis as an assertion identifying an effect but no cause.  Identifies broadly aspects of the scope or constraints of the hypothesis.	Attempts to frame a hypothesis that identifies a prediction and a variable.  Identifies some constraints on the hypothesis and states its scope in terms of what will and will not be covered.	Frames a hypothesis that identifies a prediction and variables.  Describes some relevant and specific constraints on the hypothesis and describes some aspects of the scope in terms of what will and will not be covered.	Frames a hypothesis that identifies a prediction, reasonable variables and is testable.  Explains most relevant specific constraints on the hypothesis and describes in detail most aspects of the scope in terms of what will and will not be covered.	Frames a well-informed hypothesis that identifies a specific prediction, logical variables and is testable.  Explains all relevant and key specific constraints on the hypothesis and explains thoroughly all aspects of the scope in terms of what will and will not be covered.
	Part 1		Identifies limited findings derived from the manipulated dataset. Limited interpretation of the manipulated data.	Identifies some patterns and relationships in the manipulated dataset and formulates some findings. Some interpretation of the manipulated data.	Identifies patterns and relationships in the manipulated dataset to formulate a range of findings. Generally accurate interpretation resulting in useful findings.	Identifies accurately a set of findings derived from locating key relationships and patterns in the manipulated dataset.	Identifies insightful and accurate findings based on a rigorous interpretation of the manipulated dataset.
	(b)		Makes some observations about the findings and draws a conclusion to the hypothesis. There is little coherence between the findings and the conclusion.	Draws a conclusion to the hypothesis based on the interpretation of the findings. There are limited connections between the findings and the conclusion.	Interprets findings to identify some valid connections. Draws a conclusion to the hypothesis, based on this interpretation, however, it cannot be fully substantiated.	Interprets findings to identify key connections and draws from these a valid conclusion to the hypothesis.	Draws a valid conclusion to the hypothesis that is fully substantiated.
	Part 2						

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Assessment Criteria	Levels of Performance				
	Not shown	1–2 (low)	3–4	5–6 (medium)	7–8
2. Understanding of project management concepts and processes		<p>Prepares a Gantt chart that includes some stages of the problem-solving methodology and identifies limited activities</p> <p>Constructs a limited project plan using software that identifies limited milestones (concepts), and tasks and associated time allocations (processes).</p> <p>Omissions, errors and brevity reduce the effectiveness of the chart to adequately monitor progress.</p>	<p>Prepares a Gantt chart that includes most stages of the problem-solving methodology and identifies some activities</p> <p>Prepares a Gantt chart using software that identifies some student-determined milestones, few dependencies (concepts) and a range of tasks and time allocations (processes).</p> <p>Some omissions and errors reduce the effectiveness of the chart to adequately monitor progress.</p>	<p>Prepares a Gantt chart that includes all stages and some activities of the problem-solving methodology for both parts of the project.</p> <p>Prepares a Gantt chart using software that identifies some of the relevant student-determined milestones and key dependencies (concepts), and some of the key tasks, sequencing of tasks and time allocations (processes).</p> <p>Generally effective chart with minimal errors to monitor progress.</p>	<p>Prepares a Gantt chart that documents all stages and activities of the problem-solving methodology for both parts of the project.</p> <p>Prepares a Gantt chart using software that identifies most of the relevant student-determined milestones, key dependencies (concepts), and key tasks, sequencing, resources and time allocations (processes).</p> <p>Mainly accurate and coherent chart contributes to a project management plan to monitor progress.</p>
					<p>9–10 (high)</p> <p>Prepares a Gantt chart that documents all stages and activities of the problem-solving methodology for both parts of the project.</p> <p>Prepares a coherent and accurate Gantt chart using software that identifies all required project management milestones key dependencies (concepts), and key tasks, sequencing, resources and time allocations (processes).</p> <p>Accuracy, completeness and coherence of the chart contributes to an effective project management plan to monitor progress.</p>

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	Not shown	1–2 (low)	3–4	5–6 (medium)	7–8
3. Skills in acquiring, validating and referencing data		Acquires a data set that is from a secondary data source.	Acquires a limited number of data sets from secondary data sources that includes different types of data. Limited data acquisition methods used.	Acquires a range of data sets that includes different types of data and comprises both qualitative and quantitative data. Acquires some data from primary data sources. Some different data acquisition methods used.	Acquires multiple data sets that includes different types of data and states (fully digitised or physical) and includes both qualitative and quantitative data. Both primary and secondary data sources are used. Some appropriate data acquisition methods are used.
		Selects and applies limited electronic or manual validation techniques to determine the integrity of some aspects of the acquired data.	Selects and applies some electronic and manual techniques to specifically determine the integrity of some acquired data. Errors affect the suitability of the data for manipulation and interpretation purposes.	Selects and applies a range of appropriate electronic and manual validation techniques to discriminate acquired data on the basis of some specific criteria (timeliness, authenticity, relevance and accuracy). Some invalid data exists but it does not reduce the overall usefulness for manipulation and interpretation purposes.	Selects and applies a complete set of validation techniques that result in a dataset that has full integrity.
		Limited reference of acquired data using a non-standard method. Referencing conventions applied inconsistently.	Uses a standard referencing system, however, some omissions or inconsistencies reduce the ability to efficiently locate the sources.	Uses a standard referencing system and applies generally accepted conventions. Some errors exist but data sources can be located.	Uses a standard referencing system and applies conventions consistently and appropriately to each data source and acquisition method. Correctly acknowledges all intellectual property.

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	Not shown	1-2 (low)	3-4	5-6 (medium)	7-8	9-10 (high)
4. Skills in organising, manipulating and securing data and information		Attempts to structure some data in readiness for manipulation.	Prepares some of the selected data for manipulation including correct data types and structures.	Prepares the acquired data for manipulation so that correct data types and structures are evident. Attempts to codify qualitative data using some physical techniques or software tools.	Prepares the data for manipulation including correct data types and structures. Codifies most qualitative data using appropriate physical techniques or software tools.	Thoroughly and systematically prepares the data for manipulation by selected software tools including codifying all qualitative data using appropriate physical techniques or software tools.
		Applies limited manipulation processes and techniques to the selected data to produce information for interpretation.	Uses some functions and techniques to manipulate the selected data to produce some information for interpretation.	Uses a range of software functions and techniques to manipulate the selected data to produce information for interpretation. Some information is irrelevant or not suitable for interpretation.	Uses a range of appropriate software, software functions and techniques, formats and conventions to manipulate the selected data to produce accurate information for interpretation.	Uses an extensive range of software, software functions, techniques, formats and conventions to manipulate the selected data to produce insightful information suitable for interpretation.
		Uses limited physical or software security controls to protect some data and information. Meets limited legal requirements.	Uses some software and physical security controls to protect the storage or communication of some data and information. Meets some legal requirements	Selects and applies physical and software security controls to protect the storage and communication of most data and information. Meets most legal requirements.	Selects and applies appropriate physical and software security controls to ensure that all stored and communicated data and information is protected. Meets key legal requirements.	Selects and applies a comprehensive range of physical and software security controls to protect all stored and communicated data and information. Meets all legal requirements.
		Applies a limited file management plan.	Develops and partially applies a file management plan.	Documents and applies a logical file management plan that includes folders and file naming conventions	Documents and applies a detailed file management plan that includes hierarchical folders.	Documents and applies a comprehensive file management plan.

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Assessment Criteria	Levels of Performance				
	Not shown	1-2 (low)	3-4	5-6 (medium)	7-8
<b>5. Skills in generating design ideas and designing preferred solutions</b>		Lists narrow sets of relevant criteria for selecting the preferred design idea and evaluating the multimodal online solution.	States some general and relevant criteria for selecting the preferred design idea and evaluating the multimodal online solution.	States some specific and relevant criteria for selecting the preferred design idea and evaluating the effectiveness of the multimodal online solution.	Specifies a complete set of relevant criteria for selecting the preferred design idea and evaluating the effectiveness of the multimodal online solution.
		Generates two design ideas that have minor differences in their representation of the solution's appearance or functionality.	Generates two or three design ideas that are slight modifications of each other in their representation of the solution's appearance and functionality.	Generates two or three design ideas that represent some feasible alternatives to the solution's functionality and appearance.	Generates two or three distinctive design ideas that are clearly feasible in their representations of the solution's functionality and appearance.
		Selects a preferred design idea for further development based on very limited acknowledgement of the criteria.	Selects a preferred design idea for further development based on limited criteria relevant to the solution requirements.	Selects a preferred design idea for further development based on criteria relevant to some of the solution requirements.	Selects a preferred design idea for further development based on a complete set of criteria relevant to all the solution requirements.
		Expresses the design of the solution using few relevant tools.	Selects and applies some design tools to document some of the solution.	Selects and applies design tools to document most of the solution.	Selects and applies a set of relevant and complementary design tools appropriate to documenting all the solution requirements.
		Applies limited design principles to enhance appearance. Expresses limited functionality features of the solution and errors reduce the capacity of the solution requirements to be met.	Applies some relevant design principles to enhance appearance with some inconsistencies. Identifies some functionality requirements. Some errors exist.	Applies relevant design principles to enhance appearance with minimal errors. Identifies key functionality requirements of the solution. Few errors or omissions exist.	Applies consistently and appropriately all relevant design principles. Designs are detailed and fully demonstrate the required functionality and appearance of the solution. All solution requirements are expressed in the designs.



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	Not shown	1–2 (low)	3–4	5–6 (medium)	7–8
<b>6. Skills in technically developing a multimodal online solution that confirms or refutes a hypothesis</b>		Manipulates some data to develop a partial solution using limited software functions and techniques.	Applies some software functions and techniques to manipulate data to develop a multimodal online solution.	Selects and applies a range of software functions and techniques to efficiently manipulate some data to develop a multimodal online solution.	Correctly selects and applies a wide range of software functions and techniques to efficiently manipulate data to develop an effective multimodal online solution.
		Conducts a limited number of tests to show parts of the solution operate as intended. Limited documentation of the results. Many solution errors not detected.	Applies some techniques that partially test the functionality and appearance of the solution. Documents some results and some key solution errors not detected.	Applies some techniques to satisfactorily test the functionality and appearance of the solution. Documents most of the results. Omissions and errors reduce the capacity of the solution to meet all its requirements.	Applies a range of testing techniques and documents correctly most results. Minor omissions do not reduce the capacity of the solution to meet its requirements.
		Uses limited techniques or functions to manage the files. Errors and omissions affect the storage and retrieval of relevant information.	Applies some techniques and functions to manage files. Errors reduce the speed and accuracy of retrieving stored information.	Applies most functions and techniques to ensure that most files are stored and retrieved efficiently and effectively. Some errors exist.	Consistently applies functions, techniques and procedures to manage files so that correct information is efficiently and effectively stored and retrieved.
					Correctly selects and skillfully applies an extensive range of software functions and techniques to efficiently manipulate a range of types of data to develop an effective multimodal online solution.

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Assessment Criteria	Levels of Performance				
	Not shown	1–2 (low)	3–4	5–6 (medium)	7–8
<b>7. Skills in communicating information to educate a world-wide audience through a multimodal online solution</b>		<p>Selects some information that is relevant to a restricted audience. The purpose of the solution is unclear.</p> <p>Uses limited conventions to make information more accessible to a world-wide audience.</p> <p>Displays the content of the multimodal online solution using a limited range of formats appropriate to the types of data and its purpose.</p> <p>Restates data and information to communicate messages about the findings and conclusion. Ambiguities exist.</p>	<p>Uses some information that is understandable and appropriate to a restricted audience. Some information serves an educational purpose.</p> <p>Applies some conventions that acknowledge a world-wide audience.</p> <p>Uses some appropriate formats to enhance the appearance of the multimodal online solution. Inconsistencies reduce the effectiveness of the solution in meeting its purpose.</p> <p>Sorts and separates data and information to reduce complexity when communicating messages about the findings and conclusion.</p>	<p>Uses information generally suitable for a world-wide audience. The solution has an identifiable educational purpose.</p> <p>Applies a range of conventions that improve accessibility to a world-wide audience. Inconsistencies reduce the effectiveness of the solution.</p> <p>Use a range of formats that improve the appearance of the multimodal online solution and assists in reflecting its purpose. Minor inconsistencies exist.</p> <p>Combines some key ideas from data and information to reduce complexity when communicating messages about the findings and conclusion.</p>	<p>Uses information that is appropriate for a world-wide audience and has a clearly identifiable educational purpose.</p> <p>Applies consistently a set of conventions that acknowledge most relevant characteristics of information suitable for a world-wide audience.</p> <p>Applies consistently a range of appropriate formats to enhance the effectiveness of the multimodal online solution and its educational purpose.</p> <p>Select and presents complex data and information in a way that communicates with clarity the key messages about the findings and conclusion.</p>
					<p>Uses information that is relevant, coherent and clearly fit for the purpose of educating a world-wide audience.</p> <p>Applies conventions consistently that acknowledge all relevant characteristics of information suitable for a world-wide audience.</p> <p>Applies consistently a range of appropriate formats that effectively acknowledges differences in the types of data and information, and its educational purpose.</p> <p>Selects and presents complex data and information in new, clear and simplified ways to communicate key messages about the findings and conclusion.</p>



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	Not shown	1–2 (low)	3–4	5–6 (medium)	7–8
8. Skills in evaluating the effectiveness of a multimodal online solution and assessing the effectiveness of the project plan in monitoring progress		Lists few approaches for evaluating the solution.  States how some of the solution communicates the conclusion and the findings, referring to limited criteria.	States some feasible strategies for evaluating the solution.  Describes how some of the solution communicates the conclusion and the findings, referring to some general criteria.	Proposes some feasible strategies for evaluating the effectiveness of the solution.  Describes, making reference to some features, how the solution communicates effectively the conclusion and the findings, referring to some specific criteria.	Proposes feasible strategies for evaluating the effectiveness of the solution.  Evaluates the effectiveness of key features of the solution in communicating the conclusion and findings, using a complete set of criteria in an organised way.
		Outlines generally why some data, information and findings are included in the solution to support the conclusion. Logic errors diminish the effectiveness of the solution.	Describes some reasons for the inclusion of specific data, information and findings in the solution to support the conclusion. Some logic errors exist and diminish the effectiveness of the solution.	Describes appropriately why specific data, information and findings are included in the solution to support the conclusion. Some errors of logic exist but the solution is still fit for purpose.	Explains logically why specific data, information and findings are included in the solution to support the conclusion.
		Provides limited evidence of adjustments to the plan for some stages of the project. Identifies some general improvements made to the progress of the project due to the use of the project plan.	Records some adjustments to the initial plan during the progress of most stages of the project.  Describes how the plan and some of its adjustments assisted in monitoring and improving the project.	Records the progress of the entire project against the initial project plan using some annotations or log entries.  Explains generally how the plan and its adjustments assisted in monitoring the progress of the entire project.	Applies a range of appropriate techniques to accurately record all adjustments made to the entire project plan.  Reports clearly and comprehensively the usefulness of the initial plan and its modifications in monitoring the progress of the entire project.